

CLAIMS

1. A skid steer vehicle comprising:
 - a chassis:
 - an engine mounted on the chassis:
 - left front and right front wheels independently and pivotally mounted to the chassis:
 - left rear and right rear wheels independently and pivotally mounted to the chassis:
 - a left side hydraulic drive motor;
 - at least two left side drive belts operably coupled to the left side drive motor to drive the left front and left rear wheels;
 - a right side hydraulic drive motor; and
 - at least two right side drive belts operably coupled to the right side drive motor to drive the right front and right rear wheels;
 - wherein the left side and right side motors are controllable to skid steer the vehicle.
2. The skid steer vehicle of claim 1, wherein the left side and right side drive belts are located outside the vehicle chassis.

3. The skid steer vehicle of claim 2, wherein the left side and right side drive motors are mounted inside the chassis.
4. The skid steer vehicle of claim 3, further comprising two left side drive shafts operably coupled to the left side motor and extending through the left sidewall of the vehicle, and two right side drive shafts operably coupled to the right side motor and extending through the right sidewall of the vehicle.
5. The skid steer vehicle of claim 4, wherein one of the two left side drive belts is coupled to one of the left side drive shafts to drive the left front wheel, and wherein the other of the two left side drive belts is coupled to the other of the left side drive shafts to drive the left rear wheel.
6. The skid steer vehicle of claim 5, wherein one of the two right side drive belts is coupled to one of the right side drive shafts to drive the right front wheel, and wherein the other of the two right side drive belts is coupled to the other of the right side drive shafts to drive the right rear wheel.
7. The skid steer vehicle of claim 6, wherein the at least two left side and at least two right side drive belts are disposed inside four separate belt drive housings.
8. The skid steer vehicle of claim 7, wherein the left and right side drive motors are disposed between the front and rear wheels and further wherein shafts of the left and right motors are each coaxial with a pivot axis of a belt drive housing.
9. The skid steer vehicle of claim 8, wherein each of the two left side and two right side drive shafts extends through a sidewall of the vehicle coaxial with a pivot axis of a belt drive housing.

10. The skid steer vehicle of claim 9, wherein the at least two left side and at least two right side drive belts are link belts made of a plurality of links mechanically coupled together.
11. The skid steer vehicle of claim 9, wherein the at least two left side and at least two right side drive belts are flexible composite belts having an internal core of load-carrying fibers surrounded by a flexible elastomeric matrix.
12. The skid steer vehicle of claim 9, wherein the at least two left side and at least two right side drive belts are each coupled at a first end to a drive shaft extending from the sidewall of the vehicle and at a second end to a sprocket coaxial with a drive wheel.
13. A work vehicle comprising:
 - a frame;
 - an engine mounted on the frame;
 - left front and right front wheels spring mounted to the frame;
 - left rear and right rear drive wheels spring mounted to the frame;
 - a left side drive motor;
 - at least two left side drive belts operably coupled to the left side drive motor to drive the left front and left rear wheels;
 - a right side drive motor; and
 - at least two right side drive belts operably coupled to the right side drive motor to drive the right front and right rear wheels;
 - wherein the left side and right side motors are operable to skid steer the vehicle.

14. The skid steer vehicle of claim 13, wherein the at least two left side and right side drive belts are located outside the vehicle chassis.

15. The skid steer vehicle of claim 14, wherein the left and right side drive motors are mounted inside the chassis.

16. The skid steer vehicle of claim 15, further comprising two left side drive shafts operably coupled to the left side motor, and two right side drive shafts operably coupled to the right side motor.

17. The skid steer vehicle of claim 16, wherein one of the at least two left side drive belts is coupled to one of the left side drive shafts to drive the left front wheel, and wherein another of the at least two left side drive belts is coupled to another of the left side drive shafts to drive the left rear wheel.

18. The skid steer vehicle of claim 17, wherein one of the at least two right side drive belts is coupled to one of the right side drive shafts to drive the right front wheel, and wherein another of the at least two right side drive belts is coupled to another of the right side drive shafts to drive the right rear wheel.

19. The skid steer vehicle of claim 18, wherein the at least two left and at least two right side drive belts are disposed inside belt drive housings.

20. The skid steer vehicle of claim 19, wherein the left and right side drive motors are longitudinally disposed between the front and rear wheels and further wherein shafts of the motors are coaxial with a pivot axis of at least one belt drive housing.

21. The skid steer vehicle of claim 20, wherein each of the two left side and two right side drive shafts extends through a sidewall of the vehicle coaxial with a pivot axis of a belt drive housing.

22. The skid steer vehicle of claim 21, wherein the at least two left side and at least two right side drive belts are link belts made of a plurality of links mechanically coupled together.

23. The skid steer vehicle of claim 21, wherein the at least two left side and at least two right side drive belts are flexible composite belts having an internal core of load-carrying fibers surrounded by a flexible elastomeric matrix.

24. The skid steer vehicle of claim 21, wherein the at least two left side and at least two right side drive belts are coupled at a first end to a drive shaft extending from the sidewall of the vehicle and at a second end to a sprocket coaxial with a drive wheel.

25. A driven suspension for a skid steer vehicle comprising:

a belt drive housing having a first end and a second end, wherein the first end is pivotally couplable to a skid steer chassis;

a drive belt disposed in the belt drive housing;

a first drive shaft supported in the belt drive housing and configured to engage and drive the drive belt;

a second drive shaft supported in the belt drive housing and configured to engage and be driven by the drive belt; and

a ground-engaging drive wheel coupled to the second drive shaft to be driven thereby.

26. The suspension of claim 25, wherein the drive belt is comprised of a plurality of links.

27. The suspension of claim 26, further comprising:

a first sprocket supported on the first drive shaft and drivingly engaged to the belt;
and

a second sprocket, supported on the second drive shaft and engaged to the belt to be driven thereby.

28. The suspension of claim 27, wherein the drive shaft extends through one side of the belt drive housing and the axle extends through an opposing side of the belt drive housing.